

ABSTRACT OF THE DISCLOSURE

An intake air dehumidification system for an internal combustion engine includes a peltier junction device responsive to at least one control signal to cool, and therefore condense moisture from, ambient air supplied by an air intake conduit to an intake manifold of the engine. Specific humidity of the ambient air supplied to the intake manifold is determined, and a control circuit is provided to produce the at least one control signal as a function of the specific humidity to maintain the specific humidity of the ambient air supplied to the intake manifold near a target humidity value.